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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/888,419  | 06/26/2001  | Takenori Goto        | 010802              | 9498             |
| 38834   | 7590        | 03/29/2004           | EXAMINER            |                  |
| WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP<br>1250 CONNECTICUT AVENUE, NW<br>SUITE 700<br>WASHINGTON, DC 20036 |             |                      | NGUYEN, JOSEPH H    |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2815                |                  |

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

8M  
**Office Action Summary**

Application No.

09/888,419

Applicant(s)

GOTO, TAKENORI

Examiner

Joseph Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 12-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2, 4-11 are rejected under 35 U.S.C. 102(b) as being anticipated by figure 12 of the acknowledged prior art (APA).

Regarding claim 1, figure 12 of (APA) discloses a nitride based semiconductor laser device comprising a transparent substrate 51 having conductive properties; a nitride based semiconductor layer 54 formed on one surface of said transparent substrate and constituting a cavity having a front facet on a side of laser light emission and a rear facet on an opposite side from said front facet; a first ohmic electrode 60 of a first conduction type formed on the other surface of said transparent substrate; and a second ohmic electrode 61 of a second conduction type formed on said nitride based semiconductor layer, wherein at least one of said first and second ohmic electrodes is formed in such a shape or arrangement that the directions of the front facet and the rear facet of said cavity of said nitride based semiconductor layer can be distinguished, and wherein one of said first and second ohmic electrodes can be observed through said transparent substrate and said nitride based semiconductor layer from the other side of said first and second ohmic electrodes.

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Regarding claim 2, figure 12 of (APA) discloses said first ohmic electrode 60 and second ohmic electrode 61 have different shapes.

Regarding claim 4, figure 12 of (APA) discloses said second ohmic electrode 61 is arranged on a region different from a region above a region where said first ohmic electrode is formed in said nitride based semiconductor layer.

Regarding claim 5, figure 12 of (APA) discloses said transparent substrate 51 is composed of gallium nitride.

Regarding claim 6, figure 12 of (APA) discloses said nitride contains at least said nitride based semiconductor layer contains at least one of gallium, aluminum, indium, boron and thallium.

Regarding claim 7, figure 12 of (APA) discloses at least one of said first and second ohmic electrodes is asymmetric with respect to a line passing a center point of said cavity length and vertical to the cavity length direction.

Regarding claim 8, figure 12 of (APA) discloses said nitride based semiconductor layer has a striped current injection region, and said first and second ohmic electrodes respectively have regions opposite to said striped current injection region.

Regarding claim 9, figure 12 of (APA) discloses dielectric films respectively formed at a front facet and a rear facet of said cavity.

Regarding claim 10, figure 12 of (APA) discloses said dielectric films respectively formed at the front facet and the rear facet of said cavity have different reflectances.

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Regarding claim 11, figure 12 of (APA) discloses said nitride based semiconductor layer comprises a cladding layer 52 of a first conduction type, an active layer 54 and a cladding layer 57 of a second conduction type.

Claims 1,3-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Koga.

Regarding claims 1, 3-11, Koga discloses on figure 8 all the structures set forth in the claimed invention.

### ***Response to Arguments***

Applicant's arguments filed on 11/19/2003 have been fully considered but they are not persuasive.

Applicant argues that in (APA) or Koga, the directions of the front facet and the rear facet of the cavity cannot be distinguished by the shape or arrangement of at least one of the two electrodes as recited in now amended claim 1. However, it is clear that in (APA) or Koga, the directions of the front facet and the rear facet of the cavity can be distinguished by the shape or arrangement of at least one of the two electrodes. One of ordinary skill in the art would be able to distinguish the directions of the front facet and the rear facet of the cavity based on the shape or arrangement of at least one of the two electrodes in (APA) or Koga since the front facet and the rear facet are structurally arranged around the area of at least one of the two electrodes therein. Furthermore, "front" and "rear" are arbitrary labels and facets of the prior art can be so labeled. The

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descriptive language in the claims does not structurally distinguish the claims over the prior art applied.

Moreover, applicant argues that in figure 12 of APA, neither of the ohmic electrodes is formed in such a shape or arrangement that the directions of the front facet and rear facet of the cavity of said nitride based semiconductor layer can be distinguished. However, applicant admitted on page 3 of the instant application that it takes much time to distinguish the directions of the front facet and rear facet of the cavity of the conventional semiconductor laser device. As such, it is difficult and yet still possible to distinguish the directions of the front facet and rear facet of the cavity of the conventional semiconductor laser device. Further, the ohmic electrodes in figure 12 of APA have different sizes and meet the broad limitation of claim 1. Also, the conventional device is formed of substantially the same materials as that of the claimed subject matter. Therefore, figure 12 of APA does not structurally distinguish from the claimed invention herein.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Nguyen whose telephone number is (703) 308-1269. The examiner can normally be reached on Monday-Friday, 7:30 am- 4:30 pm

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on (703) 308-1690. The fax phone numbers for

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the organization where this application or proceeding is assigned is (703) 308-7382 for regular communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

JN  
March 23, 2004



JEROME JACKSON  
PRIMARY EXAMINER